

with several structural differences. It more resembles a *Cuspicona*, but the generic characters are those of *Diaphyta*.

Myappena capito Dist.

Distant says that "this genus appertains to the group of genera distinguished as *Platycoraria* Bergr.," but in the description he writes: "Abdominal segments 1-5 with a transverse strigose vitta *behind the spiracles*" (the italics are mine). I have not seen this insect, but it can certainly not belong to the *Platycoraria*, as in this group the strigose ventral vitta is situated far *inward* from the spiracles, forming an uninterrupted curve from the first to the third segment. The "strigose vitta" in *Myappena* Dist. are certainly not homologous with the stridulatory vitta in the *Platycoraria*. As the rostrum is described as only passing the anterior coxæ *Myappena* cannot even belong to the Halyinae. Its position will remain enigmatical until it has been re-examined and redescribed by a hemipterist having access to the type.

New Species of Lyttidae, with notes on Described Species (Coleop.).

By CREIGHTON WELLMAN, M.D., F.E.S.

(Studies from the Laboratory of Tropical Medicine and Hygiene, under the direction of Creighton Wellman, Tulane University of Louisiana, No. 2).

The writer has for several years been interested in the Lyttidae (Meloidae, auctt.) on account of their parasitic habits and the bearing of the facts regarding their habits on the general question of parasitism, and also because of the employment by African and Oriental natives of substances prepared from these insects as medicines, aphrodisiacs, poisons for suicide and murder, etc.

In the course of an examination of large amounts of material from the British, Berlin and Indian Museums, the Pusa collection of Bengal, several private collections and my own cabinet, I have accumulated a number of notes which do not

bear on my work which is to appear in the Fauna of British India or on any other special investigation now in hand. These are brought together in the present paper with the object of adding to the still somewhat scanty knowledge we possess of this important and interesting group of insects.

Genus ZONABRIS Har.

The following notices of species are from examination of types or authentic specimens:

Zonabris hauseri and *Z. lucens* are distinct species; *lucens* can be told from *hauseri* by its longer fourth article of the antenna and its dark elytral apex.

Z. crux var. *opulentus*. This form should be considered as a variety of *lucens* and not of *crux*.

Z. elegantissimus var. *confluens*. This is merely a slight color variation.

Z. fasciculata Esch. This is a good species, near *maculata*, '01.

Z. subsplendidula Rtt. and *Z. staudingeri* Hdn. are both varieties of *Z. splendidula* Pall.

Z. frolovi, *Z. intermedia* and *Z. königi* are color variations of the same species.

Z. humerosa, *Z. chodshentica*, *Z. scabiosae* and *Z. euphratica* are all varieties of the same species based on differences of the elytral pattern.

Z. bertrandi Cast. = *Z. ustulata* Reiche.

Z. dicincta Bert. = *Z. bizonata* Gerst.

Z. (Caryna) posthuma Mars. is a variety of *M. (C.) mixta* Mars.

Genus ELETICA F.

Eletica maerens Pér. = *E. rufa* F. var.

E. rufa F. var. **grandiceps** n. var.

Brown, smaller than typical forms, structural characters as in *rufa* except that the head is proportionately very much larger than in normal specimens.

"Africa."

There is a specimen in the British Museum.

Eletica bicolor Champ. var. **fuamboensis** n. var.

Differs from *bicolor* in having the head proportionately smaller, the eyes rufous and more convex and the head less canaliculated at vertex. The coloring is as in *bicolor* except that the thorax is black.

"Fuambo, Brit. Cent. Africa, '95-1."

British Museum.

This insect may represent a new species, but the extraordinary variability in the genus makes it impossible to announce it as such until more material appears.

E. pallidipennis Fairm. = *E. rufa* F.

Genus **EPICAUTA** Redt.**Epicauta formosensis** sp. n.

Black, with red head, *clypeus* infuscate; back and sides of pronotum, suture, margin and apices of elytra, edges of ventral segments, episterna and mesosterna all edged with white pubescence; *form* large, robust, elongate, somewhat cylindrical; *head* large, subquadrate, strongly rounded, a median impressed line on the occiput, pustules back of bases of antennae small, punctuation sparse, but uniform and coarse, punctures on frons a little finer than rest of head, pubescence heavier and larger at back and sides; *labrum* poorly obcordate, transverse, sides more strongly punctured than disc, pubescence heavier at anterior angles, labro-clypeal suture distinct; *clypeus* rounded behind, almost straight in front, transverse, very much more coarsely punctured than head, pubescence stronger at sides; *maxillary palpi* long, somewhat slender, art. 2 and 4 about equal in length, art. 3 a little shorter than others and a little broader than 2, art. 4 broader than 3, bluntly rounded and flattened; pubescence sparse; *antennae* long and robust, art. I the stoutest, 2 about 2-3 as long as 1, 3 about 1½ as long as 1, 4 a little longer than 2 and gradually increasing and tapering to 10, 11 a trifle longer than 10 and bluntly sharpened; *eyes* small, narrow, reniform.

Pronotum short, subquadrate, a little narrow behind, strongly constricted in front, margin distinctly everted, a slight median depression posteriorly, another at middle of disc; punctuation not quite as strong as head but very thick and close, pubescence very short and rather heavier at sides; *scutellum* rather rounded triangle, medium, somewhat smooth; *elytra* parallel separately, rounded at apices, ora distinct, nervure indistinct, evenly and finely punctured, granulose, pubescence short, close lying; *ventral surface* a little more heavily punctured than elytra; *legs* large, long, robust, femora and tibiae a little more finely and thickly punctured than abdomen, pubescence pale;

posterior tibial spurs somewhat spoonshaped, the inner the longer and the outer the heavier; *tarsi*, long and stout; *claws*, long and robust.

Type in British Museum. Type locality, Formosa.

Distribution. Formosa, Japan (Rev. H. Loomis): C. Formosa, '94; Formosa (Bowring), '63; British Museum (3); Wellman Coll. (1).

Waterhouse (Trans. Ent. Soc. 1891, III, p. 407) referred this species to *assamensis* with a query. It is perfectly distinct, however, and may be told by the larger size, white marginal pubescence, the entire lack of long black hair on the sternum, and the heavier and sparser punctuation of the head. The specimen in my collection, labeled *chinensis* Cast., is not quite typical, being smaller, with a larger smooth area on the frons.

Epicauta insularis Haag-Rut. var. **montalbana** n. var.

Differs from typical specimens by having the pronotum uniformly dark red instead of black. Although the essential characters are identical with *insularis* the color difference is so striking that any one would at first glance pronounce it a new species.

This pretty variety was sent me by Mr. Charles S. Banks, Entomologist of the Bureau of Science, Manila, who writes concerning it as follows: "Those numbered 11,059 were found by Mr. W. Schultze, my assistant, very abundant at Montalban, about 30 kilometers from Manila. They were taken on the 6th of June, 1909, and were present in thousands. Mr. Schultze says that wherever they touched his hand they caused tiny blisters."

I have in my collection typical specimens of *insularis*, also taken by Mr. Banks, and there is another series in the United States National Museum, from Benguet, '03, and Manila, '09, sent by the same collector, who also reports in a letter to the writer the following other Philippine captures: Gen. *Cissistes cephalotes* '01. Manila, Sept., '03 (R. E. Brown, S. J.), *Horia testacea* F., Negros Is., P. I., '02 (Banks).

Genus LYTTA F.

Lytta signifrons Fabr. = *L. coelestina* Haag.

L. hildebrandti Haag. = *L. vittipennis* Klbe.

L. flagellaria Er. is a *Macrobasis*.

Lytta bieti n. sp.

Color metallic, bluish purple, a yellow spot on the vertex, elytra with a yellow vitta extending obliquely from the basal margin over the humeral callus to the apex and ending nearer the suture than the margin; *form* medium, robust, depressed, slightly wider posteriorly; *head* large, triangular, slightly rounded angles, a slight vertical median impressed line, an impression at base of antenna on each side, another impression at the anterior end of the light spot on vertex, coarsely and very sparsely punctured, becoming a little denser at frons; pubescence short, sparse and mixed dark and lighter at back and under head; *labrum* strongly obcordate, a median smooth space, finely and sparsely punctured, pubescence pale, sparse, labro-clypeal suture distinct; *clypeus* very short, transverse, narrowed in front, posterior border convex, a foveate impression on either side, finely and thickly punctured, pubescence sparse; *maxillary palpi* long and medium, art. 2 medium, slightly obconical, art. 3 short, obconical, last article the longest of all, slightly ovoid; *antennae* art. 1 short, strongly swollen, art. 2 small, beadlike.

Pronotum short, transverse, narrowed behind, strongly gibbous at sides, suddenly constricted into neck, a median longitudinal impressed line to near posterior margin ending in a large impression, reflexed posterior margin strong at middle weakening at sides, a large, round, shallow fovea on either side of disk, disk around these foveae smooth, impunctate, and in front of these it is sparsely and coarsely punctured, a little coarser than head, pubescence short, sparse, dark; *scutellum* large, rounded, a large deep fovea taking in nearly all of it; *elytra* less than three times as large as joint width, ora and nervures distinct, evenly, mediumly, coarsely and rugosely punctured, light and dark areas punctured the same, pubescence sparse and very short, slightly dehiscent and separately rounded at apices; *ventral surface* of mesosternum finely, thickly and rugosely punctured, pubescence mediumly short, ventrals of abdomen finely, sparsely and transversely aciculate punctured, pubescence mediumly short, sparse and confined more to sternum; *legs* medium long and stout, femora and tibiae punctured about like ventrals but not aciculate, posterior tibial spurs, outer with slight tendency to being trumpet-shaped, inner sharp and curved; *tarsi* long and slender; *claws* short and stout.

Length 13, width 3.5 mm.

Type in B. Museum. Type locality, Thibet.

Distribution. Thibet, Tatsienlou (Mgr. F. Biet.). British Museum (3 specimens).

This can readily be told at a glance from *thibetana* by its more gibbous pronotum, color, by its much coarser elytral sculpture, and by the oblique direction of the elytral vitta, in *thibe-*

tana the vitta is reflected upward at its apex, in *bieti* it is reflected downward.

***Lytta arborea* n. sp.**

Color metallic, dark blue, a small red dot on vertex, pubescence very short, sparse and mixed light and dark; *form* small, oblong; *head* subquadrate, strongly rounded angles, sparsely but very coarsely punctured, punctuation closest at frons and vertex; *labrum* short, strongly emarginate in front, sides rounded, punctured very finely and sparsely, labro-clypeal suture not distinct; *clypeus* short, transverse oblong, strongly rounded angles, sparsely and finely punctured; *maxillary palpi* long and slender, art. 2 long, very slender, cylindrical, 3 is $\frac{1}{2}$ as long as 2, and a little thicker, last not quite as long as 2 but much thicker and truncate; *antennae* medium, art. 1 short and swollen, 2 very small and beadlike, 3 a little longer than 1, cylindrical, 4-10 subequal, slightly increasing in diameter, last longer than 10, strongly pointed; *eyes* small, flat, far apart, entire.

Pronotum roughly hexagonal, a slight median impressed line, a large fovea on either side of line, on disk, feebly everted at posterior margin, more strongly at middle, punctured like head, but very much sparser and scattering; *scutellum* short and squarish, almost impunctate; *elytra* $2\frac{1}{2}$ times as long as joint width, ora prominent nervures slightly visible, uniformly rugose, jointly rounded behind; *ventral surface* very faintly and sparsely punctured; *legs* medium, femora and tibiae a little more closely punctured than ventrals; *tarsi* long and slender; *claws* long and stout; ♂ *antennae* long and delicate, last ventral deeply notched; ♀ *antennae* very short, stouter, last ventral shallowly notched.

Length 8 mm., width 2.5 mm.

Type in my collection. Type locality, Humboldt County, California.

Distribution Weitchpec, Humboldt Co., V. 20, 11, near Hamburg, Siskiyou Co., VI. 2, 11 (F. W. Numenmacher).

This rare insect was found by beating trees (? dogwood) along the river. It is very scarce, but of great interest on account of its unusual habits. None of our other indigenous blister beetles, except the genus *Pomphopoea* (and possibly *Macrobasis unicolor* Kby. which is occasionally taken on small bushes) are arboreal in habits. The present species is the first of the present genus known to live on trees. Structurally, it is not very close to any described form.

Lytta hoppingi n. sp.

Color black, prothorax bright reddish testaceous with a black longitudinal dorsal median broad stripe which is the full width of the neck in front, ending behind at the base of the pronotum in a point, very sparsely clothed throughout with short, black very sparse pubescence; *form* slender, graceful, somewhat depressed, strongly widened behind; *head* small, subglobose, slightly depressed, with a very faint median impressed line at the occiput, a faint smooth pustule on vertex, thickly and moderately coarsely punctured, the punctures being thicker around the pustule on vertex, becoming sparser toward sides and back of head; *labrum* short, broad, feebly emarginate in front, strongly rounded corners narrowed behind, thickly and finely punctured, labroclypeal suture distinct; *clypeus* short, transverse, slightly rounded in front, straight behind, punctured a little more sparsely than labrum; *maxillary palpi* short and slender, arts. 2 and 3 subequal, cylindrical, last a little longer, slightly flattened and truncate; *antennae* long and stout, art. 1 short and strongly swollen, 2 is $\frac{1}{2}$ as long as first, head-shaped, 3 a little longer than 1 and subequal from 3 to 10, last a little longer than 10 and strongly pencil-sharpened; *eyes* large, wide apart, slightly convex, entire.

Pronotum long, slender, subcylindrical, gently and slowly narrowed in front, feebly narrowed behind, posterior margin very feebly everted, a very slight median fovea near the posterior margin, punctured a little more finely than head, the dark areas punctured a little more thickly than the light; *scutellum* small, triangular, point rounded, finely and thickly punctured; *elytra* $2\frac{1}{2}$ times as long as joint width, ora distinct, very finely and vermiculately rugose, jointly rounded at apices; *ventral surface* very finely and evenly punctured; *legs* medium, femora and tibiae punctured like ventrals; *tarsi* long and mediumly strong.

♂. Articles of antennæ much longer than those of ♀, the last two ventral segments much more strongly notched than ♀, posterior tibial spurs long and slender, smooth pustule on vertex well marked.

♀. Articles of antennæ stouter, last ventral segments slightly notched, posterior tibial spurs shorter and stouter, pustule on vertex feebly marked.

Length 15 mm., width 4 mm.

Type in my collection. Type locality Fresno County, California.

Distribution. Coalinga, Fresno County, California, V. 8. (R. Hopping).

This graceful species is not very closely allied to any other now known. At a glance it somewhat resembles in form and color *Pyrotrichus vitticollis* Lec.

Lytta nunenmacheri n. sp.

Color black, a small red spot on vertex, uniformly clothed with short, very sparse, black, erect pubescence; *form* rather short and robust; *head* subquadrate, a slight median impressed line on occiput, vertex transversely somewhat impressed, sparsely and mediumly coarsely punctured, the punctures being thickest just at vertex; *labrum* obcordate; the anterior half rather thickly and coarsely punctured, the posterior half impunctate, labro-clypeal suture distinct; *clypeus* short, transverse oblong, anterior 1-3 impunctate, posterior 2-3 punctured like labrum; *maxillary palpi* short and stout, art. 2 long, 3 short, last a little longer than 2, strongly flattened, truncate; *antennae* medium in length, stout, art. 1 short, strongly swollen, 2 very small, beadlike, 3 longer than 1, 4 as long as 1, 4-10 subequal in length but gradually increasing in diameter, last longer than 10 and strongly pencil-sharpened; *eyes* small, far apart, slightly convex, very slightly notched.

Pronotum subquadrate, sharply contracted in front, rather strongly narrowed behind, posterior margin strongly everted, a deep longitudinal median impression extending almost its entire length, sparsely punctured, the punctures like those of head; *scutellum* small, rounded, finely and thickly punctured; *elytra* $2\frac{1}{2}$ times as long as joint width, slightly widened posteriorly, ora distinct, 2 middle nervures visible, finely and vermiculately rugose, a little more strongly marked toward apices, separately rounded behind; *ventral surface* sparsely and finely punctured; *legs* long and stout; femora and tibiae punctured like ventrals but a little thicker; *tarsi* long and stout; *claws* long and stout.

♂. Antennae longer and slenderer than ♀, pronotum convex and not rugose, posterior tibial spurs long and slender, slightly trumpet-shaped.

♀. Antennae shorter and stouter, pronotum slightly depressed and slightly rugose, posterior tibial spurs shorter and stouter and strongly trumpet-shaped.

Length 12-22 mm., width 3-3.8 mm.

Type in my collection. Type locality Humboldt County, California.

Distribution. Orleans Bar, Humboldt County, California, V. 22, 11 (F. W. Nunenmacher).

Nunenmacheri can be told from *blaisdelli* by its sulcate pronotum, by its much thicker (twice as thickly) punctured head, by its rugose pronotum and by the posterior tibial spurs being very trumpet-shaped (they are only grooved in *blaisdelli*) and by the much duller texture of the head and thorax and elytra.

Genus CALOSPASTA Lec.

Calospasta imperialis n. sp.

Color piceous, head and thorax testaceous, elytra and legs stramineous, antennæ varying from piceous to testaceous, pubescence sparse and short throughout; *form* small, slender and delicate, subparallel; *head* small, subglobose, sparsely and very minutely punctured, with a small shallow depression at frons; *labrum* short, transverse, oblong, finely and thickly punctured in the middle, labro-clypeal suture very distinct; *clypeus* short, transverse, with anterior angles rounded, punctured like head; *maxillary palpi* medium, slender, last article truncate; *antennae* medium, robust, article 1 short, slightly swollen, 2 bead-like, 3 almost equal to 1 and 2, cylindrical, 4-10 subequal, short cylindrical, 11 a little longer and somewhat fusiform; *eyes* large, far apart, almost entire.

Pronotum long, somewhat cone-shaped, very strongly contracted in front and slightly narrowed behind, posterior margin reflexed, a V-shaped depression posteriorly at the middle, punctuation as that of head; *scutellum* small, V-shaped, almost impunctate; *elytra* slightly widened behind, ora and nervures distinct, somewhat coarsely, irregularly and rugosely punctured, separately and bluntly rounded behind; *ventral surface* very finely but distinctly punctured; *legs* long and slender, femora and tibiae punctured like ventrals, posterior tibial spurs short and weak, the inner sharp, the outer blunt; *tarsi* long and slender; *claws* long and weak.

Length 6 mm., width 2 mm.

Type in Wellman coll. Type locality Meloland, Imperial Valley, California.

Distribution. Imperial Valley, May, 1911, on wild hollyhock (J. C. Bridwell, 9 specimens).

This species is very distinct from anything in the genus yet described.

Genus MELOË L.

Meloc latreillei Mars. = *M. purpurascens* Germ.

M. acneus Cast. = *M. purpurascens* Germ.

M. maculifrons Luc. = *M. majalis* L. var.

Genus NEMOGNATHA Illig.

Nemognatha bridwelli n. sp.

Color yellowish testaceous, antennæ and last 3 articles of tarsi piceous, pubescence medium in length, light yellow and very thick and close, covering the entire insect; *head* subtriangular, closely,

thickly and finely punctured, a median vertical smooth, raised line on the frons and vertex; *labrum* short, transverse, with strongly rounded anterior angles, punctuation that of head, labro-clypeal suture very distinct; *clypeus* transverse oblong, punctured like head; *maxillary palpi* long, mediumly robust; articles subequal, last article feebly flattened and truncate; *antennae* long, mediumly robust, article 1 short and swollen, 2 not quite as long as 1, cylindrical, 3-10 subequal, moniliform, becoming gradually thinner and slightly flattened on the under side towards the end, 11 about equal to preceding and bluntly pointed; *eyes* large, narrow, strongly uniform and far apart.

Pronotum transverse oblong, sharply and shortly contracted in front, sides parallel, posterior margin slightly reflexed, a very small posterior median depression, punctured like head, but more sparsely; *scutellum* large, triangular with rounded apex, excavated in middle, feebly and thickly punctured; *elytra* slightly narrowed behind, ora and nervures not distinct; very thickly, finely and rugosely punctured, uniformly and separately rounded behind; *ventral surface* punctured like elytra but more sparsely; *legs* medium and robust, femora and tibiae punctured like ventrals but a little more closely, posterior tibial spurs the inner slender and pointed, the outer thick and grooved; *tarsi* long and mediumly robust; *claws* short and stout.

Length 9 mm., width 4 mm.

Type in Wellman collection. Type locality, Imperial Valley, California.

Distribution, Meloland, Imperial Valley, May 11, on arrowweed, (J. C. B.) 3 specimens.

This species may be placed near *punctipennis* Lec. and *immaculata* Say., but is easily told from either by its very thick pubescence.

SECOND INTERNATIONAL CONGRESS OF ENTOMOLOGY.—The Second International Congress of Entomology will be held at Oxford, England, from August 5 to 10, 1912. Further particulars will be announced shortly.

The Executive Committee proposes to find for members of the Congress lodgings in the town, or in rooms in one of the Colleges at a moderate charge; rooms in the Colleges will be available only for men. The Executive Committee invites an early provisional notice of intention to join the Congress, in order to be able to make the arrangements for the necessary accommodation.

The Proceedings of the First Congress are in the press and will be published shortly.

All communications and inquiries should be addressed to the General Secretary of the Executive Committee, Dr. Malcolm Burr, care of the Entomological Society of London, 11 Cavendish Square, London, W., England.

ENTOMOLOGICAL NEWS.

[The Conductors of ENTOMOLOGICAL NEWS solicit and will thankfully receive items of news likely to interest its readers from any source. The author's name will be given in each case, for the information of cataloguers and bibliographers.]

TO CONTRIBUTORS.—All contributions will be considered and passed upon at our earliest convenience, and, as far as may be, will be published according to date of reception. ENTOMOLOGICAL NEWS has reached a circulation, both in numbers and circumference, as to make it necessary to put "copy" into the hands of the printer, for each number, four weeks before date of issue. This should be remembered in sending special or important matter for a certain issue. Twenty-five "extras," without change in form and without covers, will be given free, when they are wanted; if more than twenty-five copies are desired, this should be stated on the MS. The receipt of all papers will be acknowledged. Proof will be sent to authors for correction only when specially requested.—Ed.

PHILADELPHIA, PA., JANUARY, 1912.

The Second International Entomological Congress will be held in Oxford, England, next summer. Owing to the distance of the place of meeting from this country, those persons thinking of attending will probably wish to consider ways and means and make their plans at an early date. The meeting will be held August 5th to 10th, the first Congress in Brussels, Belgium, having been held from the 1st to the 6th of August. The First Congress was a decided success, and from present indications the Second Congress will prove even more important. The attendance from America at the First Congress was small as might have been expected, on account of the distance and expense of the journey. Americans should take a greater interest in the coming Congress and see that this great continent is well represented. All those interested in the study are eligible for membership and we hope to see a much larger attendance from this side of the Atlantic this year. It will be possible to see the great collections of England under very favorable circumstances and to make the acquaintance of our fellow workers of Europe. Make up your mind to go. You will have a fine time, an intellectual treat and a warm welcome at Oxford. The expense need not be great. It will be possible to attend the Congress for about \$150, or as much more as you care to expend if you travel further while abroad.—H. S.

Entomological Literature.

COMPILED BY E. T. CRESSON, JR., AND J. A. G. REHN.

Under the above head it is intended to note papers received at the Academy of Natural Sciences, of Philadelphia, pertaining to the Entomology of the Americas (North and South), excluding Arachnida and Myriapoda. Articles irrelevant to American entomology will not be noted; but contributions to anatomy, physiology and embryology of insects, however, whether relating to American or exotic species, will be recorded. The numbers in **Heavy-Faced Type** refer to the journals, as numbered in the following list, in which the papers are published, and are all dated the current year unless otherwise noted. This (*) following a record, denotes that the paper in question contains description of a new North American form.

For record of Economic Literature, see the Experiment Station Record, Office of Experiment Stations, Washington.

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3. The American Naturalist.—4. The Canadian Entomologist.—5. Psyche, Cambridge, Mass.—7. U. S. Department of Agriculture, Bureau of Entomology.—8. The Entomologist's Monthly Magazine, London.—9. The Entomologist, London.—10. Nature, London.—11. Annals and Magazine of Natural History, London.—13. Comptes Rendus, Societe de Biologie, Paris.—14. Proceedings, Zoological Society of London.—18. Ottawa Naturalist.—22. Zoologischer Anzeiger, Leipzig.—24. Berliner Entomologische Zeitschrift.—35. Annales, Societe Entomologique de Belgique.—38. Wiener Entomologische Zeitung.—40. Societas Entomologica, Zurich.—43. La Cellule.—44. Verhandlungen, K. k. zoologisch-botanischen Gesellschaft in Wien.—84. Entomologische Rundschau.—86. Annales, Societe Entomologique de France, Paris.—89. Zoologische Jahrbucher, Jena.—92. Zeitschrift fur wissenschaftliche Insekten-biologie.—123. Bulletin, Wisconsin Natural History Society, Milwaukee.—166. Internationale Entomologische Zeitschrift, Guben.—184. Journal of Experimental Zoology, Philadelphia.—186. Journal of Economic Biology, London.—193. Entomologische Blatter, Nurnberg.—216. Entomologische Zeitschrift, Stuttgart.—218. Mikrokosmos. Zeitschrift fur die praktische Betatigung aller Naturfreunde, Stuttgart.—290. Biological Series, Michigan Geological and Biological Survey, Lansing.—293. Spolia Zeylanica, Colombo, Ceylon.—313. Bulletin of Entomological Research, London.—324. Journal of Animal Behavior, Cambridge, Mass.—341. Archiv fur Rassen- u. Gesellschafts-Biologie, Leipzig.—346. Fauna Exotica, Mitteilungen aus dem Gebiete der exotischen Insektenwelt, Frankfurt am Main.—350. Bulletin from the Labo-

ratory of Natural History of the State University of Iowa, Iowa City.—**351**. Zeitschrift für Allgemeine Physiologie, Herausgegeben von Max Verworm, Jena.—**352**. Revue Critique de Paleozoologie, Organe Trimestrel, Paris.—**353**. Arbeiten aus den Zoologischen Instituten der Universität Wien.

GENERAL SUBJECTS.—**Gregory, J. W.** The scientific misappropriation of popular terms, **10**, 1911, 7.—**Hoffman, F.** Noctambulas entomologicus, **216**, 1911, 175-176.—**Manders, N.** An investigation into the validity of Mullerian and other forms of mimicry, with special reference to the islands of Bourbon, Mauritius, and Ceylon, **14**, 1911, 696-749.—**Meunier, F.** Paleozoologie Insectes (Reviews). Fossil insects and crustaceans from Florissant, Colorado, by T. D. A. Cockerell, **352**, 1911, 210-212.—**Sasse, E.** Zur physiologie des nervensystems der insekten (Nach versuchen an der larve des hirschkafer [Lucanus cervus]), **351**, xiii, 69-104.—**Simpson, J. J.** Entomological research in British West Africa. Hints for collectors, **313**, ii, 187-240.—**Stiles, C. W.** The article 30 (g) of the international rules of zoological nomenclature, **38**, xxx, 202.—**Turner, C. H.** Literature for 1910 on the behavior of spiders and insects other than ants, **324**, 1911, 401-412.—**White, J. C. E.** On the killing of flies, bees, &c., by wasps, **8**, 1911, 260.

APTERA AND NEUROPTERA.—**Anon.** Von ameisenlowen, **218**, v, 164-166.—**Hoffman, R. W.** Ueber bau und funktion der dorsalkeule von *Corynephoria jacobsoni*, **22**, 1911, 382-391.—**Lozinski, P.** Ueber die malpighischen gefasse der Myrmeleonidenlarven als Spindrusen, **22**, 1911, 401-417.—**Meissner, O.** Ameisen und ameisenlowen, **40**, xxvi, 59-60.—**Muttkowski, R. A.** Studies in Tetragoneuria (Odonata), **123**, 1911, 91-34 (*) (cont.).—**Shull & Carrier.** A biological survey of the sand dune region on the south shore of Saginaw Bay, Michigan. Thysanoptera, Mallophaga, **290**, iv, 177-216, 233-242 (*).—**Wasmann & Holmgren.** Tabelle der Termitophya- und der Xenogaster-Arten, **22**, 1911, 428-429.

ORTHOPTERA.—**Kheil, N. M.** Die Finot'sche Orthopteren-sammlung in Paris, **166**, 1911, 203-204, 213-215.—**Meissner, O.** Biologische beobachtungen an *Dixippus morosus*, Nachtrag, **216**, xxv, 185-186 (cont.).—**Shull, A. F.** A biological survey of the sand dune region on the south shore of Saginaw Bay, Michigan, **290**, iv, 217-231.

HEMIPTERA.—**Collinge, W. E.** On the locomotion and length of life of the young of *Pulvinaria vitis* var., *ribesiae*, **186**, vi, 139-142.

LEPIDOPTERA.—**Ashworth, J. H.** Zoology at the British As-

sociation. Mimicry in African butterflies and moths. The scent patches of Lepidoptera, **10**, 1911, 26-27.—**Barnes & McDunnough**. On certain *Olene* species, **5**, xviii, 157-159 (*).—**Bohm, L. K.** Die antennalen sinnesorgane der Lepidopteren, **353**, xix, 219-246.—**Chittenden, F. H.** The fig moth (*Ephestia cantella*), **7**, Bull. No. 104, 1-40.—**Dognin, P.** *Heteroceres* nouveaux de l'Amérique du Sud, Fasc. III, 66 pp.—**Fassl, A. H.** Die vertikale verbreitung der Lepidopteren in der Columbischen Central-Cordillere, **346**, i, 24-26 (cont.).—**Gibson, A.** Fauna Ottawaensis. Order Lepidoptera: subfamily Geometroidea, **18**, 1911, 105-112.—**Green, E. E.** On the occasional luminosity of the beetle "*Harmatelia bilinea*, **293**, vii, 212-214.—**de Meijere, J. C. H.** Ueber getrennte vererbung der geschlechter, **341**, viii, 553-603.—**Michael, O.** Beobachtungen ueber vorkommen und lebensweise der Aguasarten des Amazonasgebietes, **346**, i, 21-23.—**Mitterberger, K.** Zur biologie von *Depressaria heydenii*, **92**, vii, 285-287. Abnormalitäten in der begattung einiger microlepidopteren, **166**, 1911, 204-206.—**Rau, P.** Fluffy *Cecropia* cocoons, **5**, xviii, 168-170.—**Reiff, W.** Experimente an ueberwinternden Lepidoptera-puppen, **92**, vii, 267-270 (cont.).—**Schaus, W.** New species of *Heterocera* from Costa Rica.—**XI**, **11**, viii, 577-602.—**Schulze, P.** Die nackengabel der Papilionidenraupen, **89**, xxxii, 181-244.—**Smyth, E. G.** Report on the fig moth in Smyrna, **7**, Bull. No. 104, 41-65.—**Srdinko, J.** Ueber die lebensweise und die zucht von *Agrotis candelisequa*, **166**, 1911, 217-219.—**Wolley Dod, F. H.** Further notes on Alberta Lepidoptera, **4**, 1911, 361-369 (cont.).

DIPTERA.—**Alexeieff, A.** Sur les cercomonadines intestinales de *Calliphora erythrocephala* et de *Lucilia* sp., **13**, 1911, 379-382.—**Bolsius, H.** Sur la structure spiralee ou discoide de l'elemente chromatique dans les glandes salivaires des larves de *Chironomus*, **43**, xxvii, 77-86.—**Doane, R. W.** *Tipula fallax* and others, **5**, xviii, 160-166 (*).—**Morgan, T. H.** An attempt to analyze the constitution of the chromosomes on the basis of sex limited inheritance in *Drosophila*, **184**, 1911, 365-412.—**Patterson, T. L.** Notes on a Sarcophagid found in a turtle, **5**, xviii, 173-174.

COLEOPTERA.—**Bickhardt, H.** Neue Histeriden aus Afrika und Sudamerika, **193**, vii, 206-217.—**Bowditch, F. C.** Further notes on *Diabrotica*. No. II, **4**, 1911, 386-389 (cont.).—**Champlain, A. B.** Notes on Coleoptera from Connecticut, **5**, xviii, 170-173.—**Collins, J.** Notes on the early stages of *Haemonia appendiculata*, **8**, 1911, 248-250.—**Gahan, C. J.** On some recent attempts to classify the Coleoptera in accordance with their phylogeny, **9**, 1911, 348-351.—**Gounelle, E.** Liste des Cerambycides de la region de Jatahy, Etat

de Goyaz, Brasil, **86**, 1911, 1-150.—**Heikertinger, F.** Zur praxis des kaferfanges mit dem katscher, **38**, xxx, 227-233.—**Kerremans, C.** Remarques synonymiques sur quelques especes du genre *Cyphogastra*, **35**, 1911, 294-297.—**Kleine, R.** Biologisches uber den schwarzen Aaskafer (*Phosphuga atrata*), **193**, vii, 193-199.—**Lund, E. J.** On the structure, physiology and use of photogenic organs, with special reference to the Lampyridae, **184**, 1911, 415-468.—**Mangan, J.** The occurrence of *Necrobia* and *Dermestes* in cotton bales, **186**, vi, 133-138.—**Netolitsky, F.** Die parameren und das system der Adephega (*Caraboides*), **44**, 1911, 221-239.—**Norton, A. H.** The potato beetle (*Doryphora decemlineata*) eating the eggs of its kind, **4**, 1911, 385.—**Nusslin, O.** Phylogenie und system der borkenkafer, **92**, vii, 271-278 (cont.).—**Ohaus, F.** Neue gattungen und arten der Dynastidengruppe Phileurini, **84**, 1911, 169-171.—**Rungius, H.** Ueber die physiologische bedeutung des kaumagens von *Dytiscus marginalis*, **22**, 1911, 442-446.—**Santschi, F.** Une nouvelle espece d'Eciton, **24**, lvi, 113.—**Strohmeyer, H.** Die familie der Platyopiden und ihre einteilung, **193**, vii, 217-218.—**Wickham, H. F.** A list of the Coleoptera of Iowa, **350**, vi, No. 2, 1-40.

HYMENOPTERA.—**Allard, H. A.** Some experimental observations concerning the behavior of various bees in their visits to cotton blossoms. II, **3**, 1911, 668-685.—**Cockerell, T. D. A.** Records of bees, **4**, 1911, 389-391 (*). Descriptions and records of bees.—XXXIX, **11**, viii, 660-673 (*).—**Cushman, B. A.** Notes on the peach and plum slug (*Caliroa amygdalina*), **7**, Bull. No. 97, pt. V.—**Girault, A. A.** Miscellaneous notes on the Hymenoptera Chalcidoidea: The genera *Arthrolytus*, *Horismenus*, *Microgaster*, **4**, 1911, 370-377 (*).—**Hormuzaki, F.** Die systematische und morphologische stellung der bukowiner foremen von *Melitaea aethalia*, und *aurelia*, **92**, vii, 261-267.—**Schmidt, A.** Neue Aphodiinen und eine synonymische bemerkung, **40**, 1911, 55-56.—**Schmiedeknecht, O.** Opuscula Ichneumonologica. Fasc. XXIX, pp. 2241-2322.—**Schulz, W. A.** Grabwespen-Typen *Tourniers*, *Brulles*, *Lepeletiers* und *Schencks*, **40**, xxvi, 57-59 (cont.).—**Turner, R. E.** Notes on fossorial Hymenoptera.—V., **11**, viii, 602-624.—**Wheeler, W. M.** Pseudoscorpions in ant nests, **5**, xviii, 166-168. Literature for 1910 on the behavior of ants, their guests and parasites, **324**, 1911, 413-429.

OPHIONINAE.—A REVIEW.—In one of the latest fascicles of the *Genera Insectorum*, namely Fascicule 114me, received at the Smithsonian Institution, October 12, 1911, and containing 100 pages and 2 plates, Mr. Gy. V. Szepligeti treats of the group of Ophioninae which in his